



## जवाहरलाल नेहरू उन्नत वैज्ञानिक अनुसंधान केंद्र

जक्कूर पोस्ट, बेगलूर - 560064, कर्नाटक, भारत

विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार के अधीन एक स्वायत्त संस्थान  
सम विश्वविद्यालय संस्था

## Jawaharlal Nehru Centre For Advanced Scientific Research

Jakkur P.O., Bengaluru - 560064, Karnataka, INDIA

An autonomous institution under Department of Science and Technology, Govt. of India.  
An Institution Deemed-to- be-University



## NOTICE INVITING TENDER

(NIT)

FOR

## ULTRA HIGH VACUUM MAGNETRON SPUTTERING MACHINE

NIT No: JNC/PUR/SSL/CNR/6004/ICMS/23-24/28E

Dated September 29th, 2023

(K. Bhaskara Rao)  
Senior Stores & Purchase Officer





Jawaharlal Nehru Centre for Advanced Scientific Research  
Jakkur Post, Bengaluru – 560 064, India  
(A Deemed University Under Deptat. Of Science & Technology, Govt. of India)  
Tel #: 00 91 80 22082750  
Email: purchase@jncasr.ac.in  
Website: www.jncasr.ac.in

### **Tender Information Summary (TIS)**

No: JNC/PUR/SSL/CNR/6004/ICMS/23-24/28/E

Dated 27.9.2023

**Sealed Tenders (Two cover system) are invited from the reputed Vendors, for the Supply, Installation and Commissioning of ULTRA HIGH VACUUM MAGNETRON SPUTTERING MACHINE at JNCASR, Jakkur Campus as per Technical Specifications (Annexure –K) and other terms and conditions.**

**The last date for submission of the sealed tenders is October 13, 2023 on or before 3.00 P.M.**

**Technical Bids will be opened on October 13, 2023 at 4.00 P.M.**

**The date of opening of Commercial Bids will be announced later.**

1. The address for submission of bids and for obtaining further information:

**Senior Stores & Purchase Officer  
Jawaharlal Nehru Centre for Advanced Scientific Research  
Jakkur PO, Bengaluru – 560064  
Tel #: 00 91 80 2208 2756 / 2982  
Email: purchase@jncasr.ac.in**

2. The bidding documents can be downloaded directly either from **website: [www.jncasr.ac.in](http://www.jncasr.ac.in)** or **<https://eprocure.gov.in/eprocure/app>**
3. Both Technical and Commercial Bids will be opened on-line.
4. Bid Security Declaration as per the format enclosed must be furnished on your letter head.
5. The President, JNCASR, Bengaluru, India reserves the right to accept any or all tenders either in part or in full or to split the order without assigning any reasons there for.
6. For price bid, please use the Price Bid format of CPPP.
7. The prices can be quoted either in INR.





### Submission of Proposal:

The proposal should be submitted in a **sealed two covers**. One containing sealed Technical Bid and the other one a sealed Price Bid. The bidder name, the nature of the envelop (either technical bid or price bid) must be clearly mentioned on top of each of the envelope. The sealed proposals must be addressed to Senior Stores & Purchase Officer, Jawaharlal Nehru Centre for Advanced scientific Research, Jakkur, Bengaluru 560 064.

**Technical Cover:** Should contain the technical specifications of the system being offered with make and model numbers and relevant part numbers. All the technical brochures / catalogues / literature/ if any.

- All the commercial terms and conditions of the offer
- Compliance statement for the tendered specifications with indication of evidence for the claims made.
- BOQs of the system without price information.
- Information of service support.
- Authorization by OEM, in case of Indian Agents, to submit quote, negotiates etc.
- Bid Security Declaration.

### Price Bid should contain:

- Bill of quantities with price information. Breakups should be given to all line items.
- Taxes and Duties
- Commercial terms and conditions
- Currency indication

NOTE: Tenders without signature of vendors on each page would be summarily rejected.

### Important Terms & Conditions:

Delivery Schedule: Please indicate the delivery schedule.

Payment: 90% payment against delivery and balance 10% payment after installation & commissioning and on submission of Bank Guarantee for 10% of Order value valid during the period of Warranty.

Warranty: Warranty for a period of **TWO years** from the date of commissioning.




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## CONTENTS OF TENDER / BIDDING DOCUMENT

The bidding documents, apart from the Invitation for Bids / Notice Inviting Tender have been divided into 7 parts as under:

Sl. No.	Name of the Part
1	Instructions to Bidder (ITB)
2	General Conditions of Contract (GCC)
3	Special Conditions of Contract (SCC)
4	Technical Specifications (Annexure – K)
5	Qualification Requirements
6	Price Bid Format (Annexure – M)
7	Other Forms - Annexures





## INSTRUCTIONS TO BIDDERS

### A. Introduction

Instructions to bidder are broad guidelines to be followed while formulating the bid and its submission to the Purchaser. It also describes the methodology for opening and evaluation of bids and consequent award of contract.

#### **1.1 Eligible Bidders**

1.1.1. This Invitation for Bids is open to all suppliers.

1.1.2. Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

1.1.3. Bidders who fulfil the pre-qualification/eligibility criteria mentioned will be considered for technical evaluation

#### **1.2 Cost of Bidding**

1.2.1. The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

#### **1.3 Fraud and corruption**

1.3.1. The purchaser requires that the bidders, suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

Sl. No.	Term	Meaning
(a)	Corrupt practice	The offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution.
(b)	Fraudulent practice	a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract.
(c)	Collusive practice	means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, non-competitive levels.
(d)	Coercive practice	means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.

1.3.2. The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.



## **B. The Bidding Documents**

### **1.4 Cost of Bidding Documents**

- 1.4.1. Interested eligible bidders may download the bidding documents as indicated in the Invitation for bids.

### **1.5 Content of Bidding Documents**

- 1.5.1. The goods required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction.
- 1.5.2. The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

### **1.6 Clarification of bidding documents**

- 1.6.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC). The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the due date for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under *clause* relating to amendment of bidding documents and Clause relating to Due date for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the other prospective bidders who are expected to take cognizance of the same before formulating and submitting their bids.

### **1.7 Amendment of Bidding Documents**

- 1.7.1. At any time prior to the due date for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.7.2. All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by cable or by fax, or by e mail and will be binding on them. The same would also be hosted on the website of the purchaser and all prospective bidders are expected to surf the website before formulating and submitting their bids to take cognizance of the amendments.
- 1.7.3. In order to allow prospective bidders reasonable time to take the amendment into account while formulating their bids, the Purchaser, at its discretion, may extend the due date for the submission of bids and host the changes on the website of the purchaser.



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## C. Preparation of bids

### 1.8 Language of Bid

- 1.8.1. The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical.
- 1.8.2. The Supplier shall bear all costs of translation, if any, to the English language and bear all risks of the accuracy of such translation, for documents provided by the Supplier.

### 1.9 Documents Comprising the Bid

- 1.9.1. The bid prepared by the Bidder shall include:

(a)	Bidder Information Form
(b)	Bid Security Declaration specified in the Invitation to Bids
(c)	Service support details form
(d)	Performance Statement Form
(e)	Manufacturer's Authorization Form
(f)	Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted
(g)	Documents establishing goods eligibility and conformity to bidding documents
(h)	Schedule of requirements
(i)	Applicable Price Schedule Form

### 1.10 Bid form and price schedule

- 1.10.1. The bidder shall complete the Bid Form and the appropriate price schedule form furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Bid Form and the appropriate Price Schedule form shall be submitted in accordance with **ITB Clause 1.18.3** of the bidding documents.

### 1.11 Bid Prices

- 1.11.1. The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the goods it proposes to supply under the contract.
- 1.11.2. Prices indicated on the price-schedule form shall be entered separately in the following manner:

(a) **For Goods manufactured within India**

i)	The price of the goods quoted Ex-works including taxes already paid.
ii)	GST and other taxes like Excise Duty, etc. which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
iv)	The installation, commissioning and training charges including any incidental services, if any.





- 1.11.3. Where there is no mention of packing, forwarding, freight, insurance charges, taxes, etc; such offer shall be rejected as incomplete.
- 1.11.4. The price quoted shall remain fixed during the **bid evaluation/contract period** and shall not vary on any account. No escalation of prices is permitted.
- 1.11.5. All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.
- 1.11.6. The purchases made by the purchaser for scientific purpose are exempt from Excise Duty and Customs Duty is liveable at a concessional rate.
- 1.11.7. The quotation should be only in Indian Rupees for Indigenous items.
- 1.11.8. The price criteria should be on Free Delivery to JNCASR, Bengaluru. Govt. Levies like Customs Duty, Sales Tax, etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, Central Customs Duty, Central Sales Tax, GST, etc., if any.

## 1.12 Bid Currencies

- 1.12.1. Prices shall be quoted in Indian Rupees for offers received for supply within India

## 1.13 Documents Establishing Bidder's Eligibility and Qualifications

- 1.13.1. The bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualification to perform the contract if its bid is accepted.
- 1.13.2. The documentary evidence of the bidder's qualification to perform the contract, if the bid is accepted, shall establish to the purchaser's satisfaction that:

(a)	The bidder meets the qualification criteria listed in bidding documents, if any.
(b)	Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and / or supply the goods.
(c)	In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

- 1.13.3. **Conditional tenders shall not be accepted.**





## 1.14 Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

- 1.14.1. To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.
- 1.14.2. To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

(a)	A detailed description of the essential technical and performance characteristics of the goods;
(b)	A list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Priced- bid; and
(c)	An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

- 1.14.3. For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

## 1.15 Bid Security (BS) / Bid Security Declaration:

- 1.15.1. The Bid Security Declaration on your Company letter head need to be submitted. Bidder shall furnish, as part of its bid, a Bid Security (BS) / Bid Security Declaration Form.
- 1.15.2. Bids submitted without BS/ Bid Security Declaration will stand rejected.
- 1.15.3. The bid security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture.
- 1.15.4. The bid security shall be and a Bank Guarantee issued by a Nationalized / Scheduled bank / Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid.
- 1.15.5. The bid security shall be payable promptly upon written demand by the Purchaser in case the conditions listed in the **ITB clause 1.15.11** are invoked.
- 1.15.6. The bid security should be submitted in its original form. Copies shall not be accepted.
- 1.15.7. The bid security of unsuccessful bidder will be discharged / returned as promptly as possible, positively within a period of 30 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.





- 1.15.8. The successful Bidder's bid security will be discharged upon the Bidder furnishing the Performance Security, without any interest. Alternatively, the BS could also be adjusted against Performance Security, if it is paid through Demand Draft / Banker's Cheque.
- 1.15.9. In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, then in such cases, the technical bid of the party would be accepted provisionally till opening of the financial bids with which the party has attached the bid security.
- 1.15.10. The bid security may be forfeited:

(a)	If a Bidder withdraws or amends or modifies or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form;
<b>OR</b>	
(b)	In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and / or fails to furnish Performance Security within 21 days from the date of contract / order.

- 1.15.11. Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

#### **1.16 Period of Validity of Bids**

- 1.16.1. Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 1.16.2. In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. Such bidder's bid will be returned unopened if they do not extend the validity of the bid as requested by JNCASR. A Bidder granting the request will not be required nor permitted to modify its bid.
- 1.16.3. Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

#### **1.17 Format and Signing of Bid**

- 1.17.1. The bids may be submitted as single bid or two-bid as specified in the Invitation for Bids.
- 1.17.2. In case the bids are invited on single bid basis, then the Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern.
- 1.17.3. In case the bids are invited on two-bid system, the Bidder shall submit the bids in two separate parts. One part shall contain Technical bid comprising all documents listed under clause relating to Documents Comprising the Bid excepting bid form and price schedule forms. The second part shall contain the priced-bid comprising bid form and



*[Handwritten signature in blue ink]*



price schedule forms. The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate.

- 1.17.4. The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled by the person or persons signing the bid.
- 1.17.5. Any interlineations, erasures or overwriting shall be valid only if they are initialled by the person or persons signing the bid.

#### **D. Submission and sealing of Bids**

##### **1.18 Submission, Sealing and Marking of Bids**

- 1.18.1. The bidders may submit their duly sealed bids generally by post or by hand.
- 1.18.2. In the case of bids invited on single bid basis, the Bidders shall seal the original and each copy of the bid in separate inner envelopes, duly marking the envelopes as "original" and "copy". The envelopes shall then be sealed in an outer envelope.
- 1.18.3 The main envelope (original) which will contain both the bids should be super scribed with our **Tender Enquiry No.JNC/PUR/SSL/CNR/ICMS/23-24/28/E Dated 27.9.2023** and to be submitted to the address given below so as to reach on or before **3.00 p.m. on October 13, 2023.**

**The Senior Stores & Purchase Officer**  
**Jawaharlal Nehru Centre for Advanced Scientific Research**  
Jakkur Post  
BENGALURU – 560064.

The envelopes must be super-scribed with the following information:

a)	Tender Reference Number
b)	Due Date
c)	Name of the Vendor

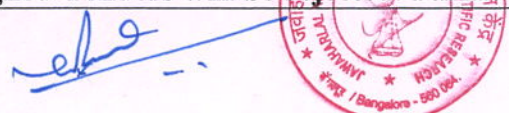
**Envelope No. 1 : Shall contain “Technical Bid” and Bid Security Declaration, etc. as per Clause 1.9.1 (a –j).**

The technical offer **should not contain any price information.**

The Technical Bid must be submitted in an organized and structured manner. No brochures/leaflets, etc. should be submitted in loose form. Please indicate page nos. on your quotation e.g. if the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.

The Technical Offer should comprise of the following:

a)	Tenders, which are submitted without following the two bid offer system, will summarily be rejected.
b)	The technical bid should contain commercial terms with reference to the tender
c)	The technical offer should be complete to indicate that all products and services asked for are quoted. Each page of the bid and cutting/corrections shall be duly signed and stamped by the bidder. <b>Unsigned Tenders will be rejected.</b> Failure to





	comply with this requirement may result in the bid being rejected
d)	Bid Security Declaration should be part of the Technical Bid
e)	Documentary evidence showing the Vendors qualification (vendors criteria) to be submitted with this cover.

**Envelope No. 2 : Shall contain “Commercial Bid” with individual prices of all items as per Clause 1.9.1 (k).**

1.18.4. The inner and outer envelopes shall be addressed to the Purchaser indicated in the Special Conditions of Contract (SCC).

1.18.5. If the outer envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening of the submitted bid. In such cases, bids received in open condition within the due date and time will be accepted at the risk of the bidder if the same is presented to the Sr. Stores & Purchase Officer before expiry of the due date and time of opening of the bids.

1.18.6. Firms submitting bids in a single envelope against the requirement of two-bid system would be considered for further evaluation at the risk & responsibility of the bidder. However, the opened priced bid would be sealed immediately by the Tender opening Committee without disclosing the price.

#### **1.19 Due date for Submission of Bids**

1.19.1. Bids must be received by the Purchaser at the address specified in SCC not later than the time and date specified in tender. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day.

1.19.2. The Purchaser may, at its discretion, extend the due date for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the due date will thereafter be subject to the due date as extended.

#### **1.20 Late Bids**

1.20.1. Any bid received by the Purchaser after the due date for submission of bids prescribed by the Purchaser will be rejected.

1.20.2. Such tenders shall be marked as late and not considered for further evaluation. They shall not be opened at all and be returned to the bidders in their original envelope without opening.

#### **1.21 Withdrawal, substitution and Modification of Bids**

1.21.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice in accordance with **ITB Clause 1.18** duly signed by an authorized representative, and shall include a copy of the authorization in accordance with **ITB Clause 1.17.4** (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:





(a)	Submitted in accordance with <b>ITB Clauses 1.17 and 1.18</b> (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” or “MODIFICATION”; and
(b)	Received by the Purchaser prior to the due date prescribed for submission of bids, in accordance with <b>ITB Clause 1.19</b> .

1.21.2. Bids requested to be withdrawn in accordance with **ITB Clause 1.21.1** shall be returned unopened to the Bidders. No bid may be withdrawn, substituted, or modified in the interval between the due date for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.

### **E. Opening and Evaluation of Bids**

#### **1.22 Opening of Bids by the Purchaser**

1.22.1. The Purchaser will open all bids one at a time in the presence of bidders' authorized representatives who choose to attend, as per the schedule given in Invitation for Bids. The Bidders' representatives who are present shall sign the quotation opening sheet evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day. In case of two-bid, the financial bid shall be opened only after technical evaluation.

1.22.2. First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.

1.22.3. The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bid(s). The contents of the bid forms and price schedule form would however be announced only at the time of opening of Priced-bids in the case of two-bid system.

1.22.4. Bids that are received late shall not be considered further for evaluation, irrespective of the circumstances.

1.22.5. Bidders interested in participating in the bid opening process, should depute their representatives along with an authority letter to be submitted to the Purchaser at the time of bid opening.





## 1.23 Confidentiality

- 1.23.1. Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 1.23.2. Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.

## 1.24 Clarification of Bids

- 1.24.1. To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the Purchaser. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.

## 1.25 Preliminary Examination

- 1.25.1. The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in **ITB Clause 1.9** have been provided, and to determine the completeness of each document submitted.
- 1.25.2. The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.

- (a) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, are to be treated as non-responsive and ignored. The following are some of the important points, for which a tender may be declared as non-responsive and to be ignored, during the initial scrutiny :

i)	The Bid is unsigned
ii)	The Bidder is not eligible
iii)	The Bid validity is shorter than the required period
iv)	The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer
v)	Bidder has not agreed to give the required performance security
vi)	The goods quoted are sub-standard, not meeting the required specification, etc.
vii)	Against the schedule of Requirement (incorporated in the tender enquiry), the bidder has not quoted for the entire requirement as specified in that schedule.
viii)	The bidder has not agreed to some essential condition(s) incorporated in the tender enquiry.





- (b) Bid Form and Price Schedule Form, in accordance with **ITB Clause 1.10**. In case of two-bid system these forms shall be examined after opening of the price bids of the technically qualified bidders.

**1.26 Responsiveness of Bids**

- 1.26.1. Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and conditions of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

(a)	affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; <b>OR</b>
(b)	limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; <b>OR</b>
(c)	if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

- 1.26.2. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

- 1.26.3. If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

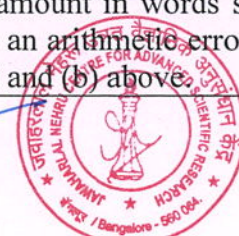
**1.27 Non-Conformity, Error and Omission**

- 1.27.1. Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

- 1.27.2. Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

- 1.27.3. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

(a)	if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
(b)	if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
(c)	if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.





1.27.4. Provided that a bid is substantially responsive, the Purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

### **1.28 Examination of Terms & Conditions, Technical Evaluation**

1.28.1. The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.

1.28.2. The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with **ITB Clause 1.14**, to confirm that all requirements specified in Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.

1.28.3. If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with **ITB Clause 1.26**, it shall reject the Bid.

### **1.30 Evaluation and comparison of bids**

1.30.1. The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.

1.30.2. To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology shall be permitted.

1.30.3. The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

i)	The price of the goods quoted Ex-works including taxes already paid.
ii)	GST which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
iv)	The installation, commissioning and training charges including any incidental services, if any.

### **1.31 Comparison of Bids**

1.31.1. The Purchaser shall compare all substantially responsive bids to determine the lowest valued bid, in accordance with **ITB Clause 1.30**.

### **1.32 Contacting the Purchaser**

1.32.1. Subject to **ITB Clause 1.24**, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.



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1.32.2. Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

### **1.33 Post qualification**

1.33.1. In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in **ITB Clause 1.13**.

1.33.2. The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.

1.33.3. An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.

## **F. Award of contract**

### **1.34 Negotiations**

1.34.1. There shall not be any negotiation normally. Negotiations, if at all, shall be an exception and only in the case of items with limited source of supply. Negotiations shall be held with the lowest evaluated responsive bidder. Counter offers tantamount to negotiations and shall be treated at par with negotiations in the case of one time purchases.

### **1.35 Award Criteria**

1.35.1. Subject to **ITB Clause 1.37**, the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The details of the award would be hosted on the website of the Purchaser.

### **1.36 Purchaser's right to vary Quantities at Time of Award**

1.36.1. The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. Further, at the discretion of the Purchaser, the quantities in the contract may be enhanced by 30% within the delivery period.

### **1.37 Purchaser's right to accept any Bid and to reject any or All Bids**

1.37.1. The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.





### **1.38 Notification of Award**

- 1.38.1. Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable or telex or fax or e mail that the bid has been accepted and a separate purchase order shall follow through post.
- 1.38.2. Until a formal contract is prepared and executed, the notification of award should constitute a binding contract.
- 1.38.3. Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to **ITB Clause 1.41**, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

### **1.39 Signing of Contract**

- 1.39.1. Promptly after notification, the Purchaser shall send the successful Bidder the Agreement.
- 1.39.2. Within twenty-one (21) days of date of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

### **1.40 Order Acceptance**

- 1.40.1. The successful bidder should submit Order Acceptance within 15 days from the date of issue, failing which it shall be presumed that the vendor is not interested and his bid security is liable to be forfeited pursuant to **ITB Clause 1.15.10**.
- 1.40.2. The order acceptance must be received within 15 days. However, the Purchaser has the powers to extend the time frame for submission of Order Acceptance and submission of Performance Security (PS). Even after extension of time, if the Order Acceptance / PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable, provided there is no change in specifications. In such cases the defaulting firm shall not be considered again for re-tendering in the particular case.

### **1.41 Performance Security**

- 1.41.1. Within 21 days of receipt of the notification of award / PO, the Supplier shall furnish performance security of 3% of Purchase Order value in the amount specified in SCC, valid till 60 days from the date of completion of the project. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.
- 1.41.2. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.



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1.41.3. The Performance Security shall be denominated in Indian Rupees.

1.41.4. The Performance security shall be as per the following forms:

(a)	A Bank guarantee or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India
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1.41.5. The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.

1.41.6. In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

1.41.7. Whenever the bidder chooses to submit the Performance Security in the form of Bank Guarantee, and then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

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## A. GENERAL CONDITIONS OF CONTRACT

### 2.1 Definitions

2.1.1. The following words and expressions shall have the meanings hereby assigned to them:

Sl. No.	Words / Expressions	Meaning
(a)	Contract	The Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
(b)	Contract Documents	The documents listed in the Contract Agreement, including any amendments thereto.
(c)	Contract Price	The price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
(d)	Day	Calendar day
(e)	Completion	The fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
(f)	GCC	The General Conditions of Contract.
(g)	Goods	All of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract
(h)	Related Services	The services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
(i)	SCC	The Special Conditions of Contract.
(j)	Subcontractor	Any natural person, private or government entity, or a combination of the above, to which any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
(k)	Supplier	The natural Person, Private or Government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
(l)	Purchaser	Jawaharlal Nehru Centre for Advanced Scientific Research as specified in SCC
(m)	The final destination	The place named in the SCC.

### 2.2 Contract Documents

2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.





## 2.3 Fraud and Corruption

2.3.1. The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

(a) The terms set forth below are defined as follows:

I.	Corrupt practice	The offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution
II.	Fraudulent practice	A misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract
III.	Collusive practice	A scheme of arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, non-competitive levels
IV.	Coercive practice	Harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract

(b) The Purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

## 2.4 Joint Venture, Consortium or Association/Amalgamation/Acquisition etc.

2.4.1. If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

### 2.4.2. Amalgamation/Acquisition etc.:

In the event the Manufacturer/Supplier proposes for amalgamation, acquisition or sale its business to any firm during the contract period, the Buyer/Successor of the Principal Company are liable for execution of the contract and also fulfilment of contractual obligations i.e., supply, installation, commissioning, warranty, maintenance/ replacement of spares, accessories, etc. While submitting your bid, you may confirm this condition

## 2.5 Scope of Supply

2.5.1. The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.





## **2.6 Suppliers' Responsibilities**

2.6.1. The Supplier shall supply all the Goods and Related Services included in the scope of Supply in accordance with Scope of Supply Clause of the GCC and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.

## **2.7 Contract price**

2.7.1. Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

## **2.8 Copy Right**

2.8.1. The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

## **2.9 Application**

2.9.2. These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

## **2.10 Standards**

2.10.1. The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

## **2.11 Use of Contract Documents and Information**

2.11.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.

2.11.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.

2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.



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## 2.12 Patent Indemnity

2.12.1. The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 2.12.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

(a)	the installation of the Goods by the Supplier or the use of the Goods in India <b>AND</b>
(b)	the sale in any country of the products produced by the Goods

2.12.2. If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

## 2.13 Performance Security (PS)

2.13.1 Within **21 days** of receipt of the notification of award of Contract / Purchase Order, the Supplier shall furnish Performance Security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.

2.13.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

2.13.3 The Performance Security shall be denominated in Indian Rupees.

2.13.4 The Performance Security shall be in one of the following forms:

(a)	A Bank guarantee or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India
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2.13.5 The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.





2.13.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

2.13.8. The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the Order Acceptance/PS is not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.

## **2.14 Installation/Inspections and Tests**

2.14.1 Bidder shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty and thereafter.

2.14.2 Installation, demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.

2.14.3 The Supplier shall at its own expense and at no cost to the JNCASR carry out all such tests and/ or inspections of the Goods and related Services as are specified in the SCC or as discussed and agreed to during the course of finalization of contract.

2.14.4 The JNCASR or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the JNCASR. The Technical Specifications and SCC shall specify what inspections and tests the JNCASR requires and where they are to be conducted. The JNCASR shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.

2.14.5 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data shall be furnished to the inspectors at no charge to the JNCASR.

2.14.6 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the JNCASR. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the JNCASR or its designated representative to attend the test and/or inspection.

2.14.7 Should any inspected or tested Goods fail to conform to the specifications, the JNCASR may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to JNCASR.





- 2.14.8 The JNCASR's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by JNCASR or its representative prior to the Goods shipment.
- 2.14.9 Supplier shall provide JNCASR with a report of the results of any such test and/or inspection.
- 2.14.10 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and/or the Indian agent shall be responsible for follow-up with their principals for ascertaining the dispatch details and informing the same to JNCASR and he shall also liaise with JNCASR to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/ Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the JNCASR on the event of the delay.

## 2.15 Packing

- 2.15.1. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2.15.2. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

<b>The marking and documentation</b> within and outside the packages shall be marked with proper paint / indelible ink.	
(a)	Each package should have a packing list within it detailing the Part No.(s), description, quantity etc.
(b)	Outside each package, the Contract No., the name and address of the Purchaser and the Final destination should be indicated on all sides and top.
(c)	Each package should be marked as 1/x, 2/x, 3/x.....x/x, where "x" is the total No. of packages contained in the consignment.
(d)	All the sides and top of each package should carry an appropriate indication / label / stickers indicating the precautions to be taken while handling / storage.

## 2.16 Delivery and Documents

- 2.16.1. Delivery of the Goods and completion and related services shall be made by the Supplier in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.





<b>Details of Shipping and other Documents</b> to be furnished by the Supplier are :	
	Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by email
(a)	Three copies of Supplier's Invoice indicating, inter-alia description and specification of the goods, quantity, unit price, total value
(b)	Packing list
(c)	Insurance certificate, if required under the contract
(d)	Railway receipt/Consignment note
(e)	Manufacturer's warrantee certificate and in-house inspection certificate, if any
(f)	Inspection certificate issued by purchaser's inspector, if any
(g)	Any other document(s) as and when required in terms of the contract
<b>NOTE:</b>	
1	The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).
2	The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

2.16.2. The mode of transportation shall be as specified in SCC.

2.16.3. The Bidders may please note that the delivery of the system should be strictly within **delivery schedule mentioned in Purchase Order.**

2.16.4. Goods should not be dispatched until the vendor receives a firm Purchase Order

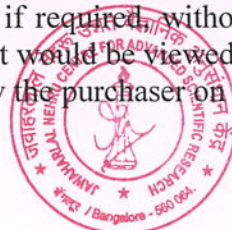
## **2.17 Insurance**

2.17.1. Indigenous goods, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

2.17.2. Where delivery of the goods is required by the Purchaser on FOR destination for, the supplier shall arrange and pay for Transit Insurance, naming the Purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.

2.17.3. The equipment to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at JNCASR site in case of Rupee transaction

2.17.4. With a view to ensure that claims on insurance companies, if any are lodged in time, the bidders and/ or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder / Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.





**2.18 Transportation**

2.18.1. Where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

**2.19 Incidental Services**

The supplier may be required to provide any or all of the services, including training, if any, as specified in **Clause-4.5**.

**2.20 Spare Parts**

2.20.1. The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

(a)	Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
(b)	In the event of termination of production of the spare parts:
	(i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
	(ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

**2.21 Warranty**

2.21.1. The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

2.21.2. The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.

2.21.3. Unless otherwise specified in the SCC, the warranty shall remain valid for **TWO YEARS** after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

2.21.4. The defects, if any, during the guarantee/warranty period are to be rectified free of charge by arranging free replacement wherever necessary.

2.21.5. The warranty on the associated software should cover providing of upgraded version/s, if any, released during the warranty period free of cost.

2.21.6. The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.





- 2.21.7 The equipment must be supported by a Service Centre manned by the principal vendor's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contract the Principal's vendor support Centre on a toll free number/web/mail.
- 2.21.8 An undertaking from the manufacturer is required in this regard stating that they would facilitate the bidder on regular basis with technology / product updates & extend support for the warranty as well.
- 2.21.9 The vendor will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.
- 2.21.10 The principal vendor must have a local logistics support by maintaining a local spares depot in the country of deployment of the equipment. This is to ensure immediate delivery of spares parts from Principal Vendor of equipment to its channel partner/system integrator.
- 2.21.11 Details of onsite warranty, agency that shall maintain during warranty and undertake Annual Maintenance Contract/Comprehensive Service Maintenance Contract beyond warranty shall be given in the offer.
- 2.21.12 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 2.21.13 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 2.21.14 If having been notified, the Supplier fails to remedy the defect within a reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 2.21.15 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.
- 2.21.16. In case the Equipment / System remains non-operational or performs below the desired level for more than 1 week after intimation of the fault in the Equipment / System then Warranty period shall be extended for further period for which Equipment / System remained non-operational or performed below the desired level, without prejudice to any other terms and conditions of the Contract.
- 2.21.17 The defects, if any, during the warranty period are to be rectified free of charge by arranging free replacement wherever necessary.

## 2.22 Terms of Payment

- 2.22.1. The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.



*[Handwritten signature]*



2.22.2. The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfilment of other obligations stipulated in the contract.

2.22.3. Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier.

2.22.4. Payment shall be made in currency as indicated in the contract.

### **2.23 Change Orders and Contract Amendments**

2.23.1. The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:

a)	Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
b)	The method of shipping or packing;
c)	The place of delivery; and/or
d)	The Services to be provided by the Supplier.
e)	The delivery schedule.

2.23.2. If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.

2.23.3. No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.

2.23.4 **E-Payment:** All payments, JNCASR prefers to make Electronic Transfers through Canara Bank, IISc Branch, Bangalore.

### **2.24 Assignment**

2.24.1. The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract to any third party, except with the Purchaser's prior written consent.

### **2.25 Subcontracts**

2.25.1. The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the Contract.

### **2.26 Extension of time**

2.26.1. Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.





2.26.2. If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, it's likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.

2.26.3. Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.

## 2.27 Penalty Clause

2.27.1. Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable.

## 2.28 Termination for Default

2.28.1. The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part

(a)	If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time;
<b>OR</b>	
(b)	If the Supplier fails to perform any other obligation(s) under the Contract
(c)	If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.

2.28.2. In the event the Purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:

(a)	The Performance Security is to be forfeited;
(b)	The Purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the Supplier shall be liable for all available actions against it in terms of the contract.
(c)	However, the Supplier shall continue to perform the contract to the extent not terminated.

## 2.29 Force Majeure

2.29.1. Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and termination for default, the Supplier shall not be liable for forfeiture of its





performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

2.29.2. For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

2.29.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

2.29.4. If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

### **2.30 Termination for Insolvency**

2.30.1. The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.

### **2.31 Termination for Convenience**

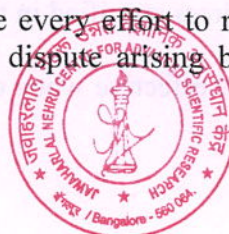
2.31.1. The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

2.31.2. The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(a)	To have any portion completed and delivered at the Contract terms and prices <b>and / or</b>
(b)	To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

### **2.32 Settlement of Disputes**

2.32.1. The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.





2.32.2. If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. .

2.32.3. The dispute settlement mechanism / arbitration proceedings shall be concluded as under:

(a)	In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the President, JNCASR and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
(b)	In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration In accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

2.32.4. The venue of the arbitration shall be the place from where the purchase order or contract is issued.

2.32.5. Notwithstanding any reference to arbitration herein,

(a)	the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; <b>and</b>
(b)	the Purchaser shall pay the Supplier any monies due the Supplier.

### **2.33 Governing Language**

2.33.1. The contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.

### **2.34 Applicable Law / Jurisdiction**

2.34.1. The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.

### **2.35 Notices**

2.35.1. Any notice given by one party to the other pursuant to this contract / order shall be sent to the other party in writing or by FAX, e-mail or / and confirmed in writing to the other party's address specified in the SCC.

2.35.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.





### 2.36 Taxes and Duties

- 2.36.1. For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
- 2.36.2. For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.
- 2.36.3. All payments due under the contract shall be paid after deduction of statutory levies.

### 2.37 Right to use Defective Goods

- 2.37.1. If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectification of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

### 2.38 Protection against Damage

The system shall not be prone to damage during power failures and trip outs. The normal voltage and frequency conditions available at site as under:

a)	Voltage 230 volts – Single phase or 415 Volt for 3 phase ( $\pm 10\%$ )
b)	Frequency 50 Hz

### 2.39 Site preparation and installation

- 2.39.1. The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The Supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the Purchaser's site immediately after notification of award / contract.

### 2.40 Annual Maintenance Contract

- 2.40.1. The bidders should also quote for Annual Maintenance Contract after warranty for subsequent years. JNCASR at its discretion may award / utilise these quotes for AMCs.
- 2.40.2. No sub-contracting will be allowed for installation or maintaining system/ equipment / instrument during or after warranty period in case AMC is awarded
- 2.40.3. Mention the charges for comprehensive maintenance contract separately in Commercial bid (for post warranty period).



*ehs*



### 3. Bidders - Eligibility and Preferential Policies

#### 3.1 Bidders

Subject to provisions in the following clauses in this section and provisions in Tender Document, this invitation for Bids is open to all bidders who fulfil the 'Eligibility Criteria' and 'Qualification Criteria' stipulated in the Tender Document. In the case of the Second Stage (of two Stage Bidding or PQB) or Special Limited Tenders, this invitation is open only to such bidders who have been previously shortlisted or specifically invited.

#### 3.2 Eligibility Criteria for Participation in this Tender

Subject to provisions in this Tender Document, participation in this Tender Process is open to all bidders who fulfil the 'Eligibility' and 'Qualification criteria. Bidder should meet (as on the date of his bid submission and should continue to meet till the award of the contract) the 'Eligibility Criteria' detailed in NIT-clause 3, which shall be considered to be part of this clause of ITB (even though it is not being reproduced here for the sake of brevity). Bidder shall submit a declaration about the 'Eligibility Criteria' compliance in Form 1.2 – Eligibility Declarations.

#### 3.3 Eligibility of bidders from specified countries

Orders issued by the Government of India restricting procurement from bidders from certain countries that share a land border with India shall apply to this procurement.

- 1) Any bidder (as defined in GCC-clause 1.2) from a country that shares a land border with India, excluding countries as listed on the website of the Ministry of External Affairs, to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects (hereinafter called 'Restricted Countries') shall be eligible to bid in this tender only if Bidder is registered<sup>1</sup> with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). Bidders shall enclose the certificate in this regard in Form 1 - bid Form.
- 2) In Bids for Turnkey contracts, including Works contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from such Restricted Countries unless such contractor is similarly registered. In such cases, the bidders shall enclose the certificate in Form 1: Bid Form.
- 3) If Bidder has proposed to sub-contract Services or incidental Goods directly/ indirectly from the vendors from such countries, such vendor shall be required to be registered with the Competent Authority. However, if Bidder procures raw material, components, and sub-assemblies from such countries' vendors, such vendors shall not require registration.
- 4) "Bidder from such Restricted Countries" means: -
  - a) An entity incorporated, established, or registered in such a country; or
  - b) A subsidiary of an entity incorporated, established, or registered in such a country; or
  - c) An entity substantially controlled through entities incorporated, established, or registered in such a country; or
  - d) An entity whose beneficial owner is situated in such a country; or





- e) An Indian (or other) agent of such an entity; or
- f) A natural person who is a citizen of such a country; or
- g) A consortium/ joint venture where any member falls under any of the above

5) The beneficial owner shall mean:

- (a) In a company or Limited Liability Partnership, the beneficial owner is the natural person(s). Whether acting alone or together or through one or more juridical persons, controlling ownership interest or exercises control through other means.

*Explanation-*

- (i) "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of the company's shares or capital, or profits.
  - (ii) "Control" shall include the right to appoint a majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder agreements or voting agreements;
- (b) In the case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together or through one or more juridical persons, has ownership of entitlement to more than fifteen percent of capital or profits.
  - (c) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  - (d) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
  - (e) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

3.4 Conflict of Interest.

Any bidder having a conflict of interest, which substantially affects fair competition, shall not be eligible to bid in this tender. Bids found to have a conflict of interest shall be rejected as nonresponsive. Bidder shall be required to declare the absence of such conflict of interest in Form 1.2 - Eligibility Declarations. A bidder in this Tender Process shall be considered to have a conflict of interest if the bidder:

- 1) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
- 2) receives or have received any direct or indirect subsidy/ financial stake from another bidder; or
- 3) Has the same legal representative/ agent as another bidder for purposes of this bid. A Principal can authorize only one agent, and an agent also should not represent or quote on behalf of more than one Principal. However, this shall not debar more than one Authorised distributor from quoting equipment manufactured by an Original Equipment Manufacturer (OEM), in procurements under Proprietary Article Certificate; or





- 4) has a relationship with another bidder, directly or through common third parties, that puts it in a position to have access to information about or influence the bid of another Bidder or influence the decisions of the Procuring Entity regarding this Tender process; or
- 5) Participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as sub-contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of a non-bidder firm as a sub-contractor in more than one bid; or
- 6) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services that it provided (or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm), for the procurement planning (inter-alia preparation of feasibility/ cost estimates/ Detailed Project Report (DPR), design/ technical specifications, terms of reference (ToR)/ Activity Schedule/ schedule of requirements or the Tender Document etc) of this Tender process; or
- 7) has a close business or family relationship with a staff of the Procuring Organisation who: (i) are directly or indirectly involved in the preparation of the Tender document or specifications of the Tender Process, and/or the evaluation of bids; or (ii) would be involved in the implementation or supervision of resulting Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Procuring Entity throughout the Tender process and execution of the Contract.

### 3.5 Regulation of Indian Agents/ Associates of Foreign Principals

Wherever the foreign principal desires to involve in this tender process, an Indian Agent/ associate, their dealings shall be regulated. Foreign Principals and their Agents/ Associates must provide required declarations in Form 1.4 – Declarations by Agents/ Associates of Foreign Principals:

- 1) The name and address of the foreign principals, if any, indicating their nationality as well as their status, i.e., whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal authorizing them specifically to make an offer in India in response to tender either directly or through the agents/ representatives.
- 2) Such Agents/ Associates shall provide self-attested documentary evidence about their identity, business details to establish that they are a bonafide business and conform to regulations.
- 3) The Bidder/ Foreign Principal must commit to submitting after the Financial bid opening, due to price-sensitive information, the Agreement between them, including the amount of commission/ remuneration included in the price (s).
- 4) Confirmation on behalf of the foreign principals that the commission/ remuneration, if any, reserved for Indian Agents/ Associates in the quoted price(s), shall be paid by the Procuring Entity in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Goods and Spares.
- 5) Failure to furnish correct and detailed information shall render Foreign Principal's bid liable to be rejected as nonresponsive in addition to other punitive actions against the Foreign Principal and their Indian Agents/ Associates for violation of Code of Integrity as per the Tender Document.





#### 4. Purchase Preference Policies of the Government

Unless otherwise stipulated in TIS/ AITB, the Procuring Entity reserves its right to grant preferences to the following categories of eligible Bidders under various Government Policies/ Directives:

- 1) Class I Local Suppliers under Public Procurement (Preference to Make in India) Order 2017" (MII) of Department for Promotion of Industry and Internal Trade, (DPIIT - Public Procurement Section) as revised from time to time.
- 2) Bidders from Micro and/ or Small Enterprises (MSEs) under Public Procurement Policy for the Micro and Small Enterprises (MSEs) Order, 2012 as amended from time to time.
- 3) Start-ups Bidders under Ministry of Finance, Department of Expenditure, Public Procurement Division OM No F.20\212014-PPD dated 25.07.2016 and subsequent clarifications; and/ or
- 4) Any other category of Bidders, as per any Government Policies, announced from time to time, if so provided in the TIS/ ITB/ AITB

##### 4.1 Make in India Order

Orders issued by the Government of India regarding eligibility to participate and for purchase preference to "Local Suppliers" to encourage 'Make in India' and promote manufacturing and production of goods and services in India shall apply to this procurement, as detailed below.

##### 4.1.1 Categories of Local Suppliers

Bidders/Contractors are divided into three categories based on Local Content. Local content in the context of this policy is the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.:

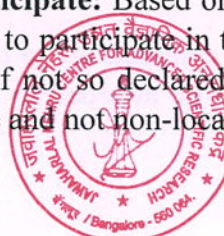
- 1) 'Class-I local Supplier' with local content equal to or more than that prescribed in TIS or 50% if not prescribed.
- 2) 'Class-II local Supplier' with local content equal to or more than that prescribed in TIS or 20% if not prescribed, but less than that applicable for Class-I local Supplier.
- 3) 'Non - Local Supplier' with local content less than that applicable for Class-II local Supplier, in sub-clause above.

##### 4.1.2 Eligibility Restrictions based on Reciprocity.

If so stipulated in the Tender Document, entities from such countries identified as not allowing Indian companies to participate in their Government procurement shall not be allowed to participate on a reciprocal basis in this tender. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.

##### 4.1.3 Eligibility to participate

- 1) **Minimum local content for eligibility to participate:** Only bidders meeting the minimum prescribed local content for the product shall be eligible to participate subject to the following conditions. This threshold shall be declared in TIS and/ or Section VI: Schedule of Requirements
- 2) **Classes of Local Suppliers eligible to Participate:** Based on the Make in India Policy, classes of local/ non-local Suppliers eligible to participate in the tender shall be declared in TIS/ AITB/ Schedule of Requirements. If not so declared, only Class-I and Class-II local Suppliers shall be eligible to participate and not non-local Suppliers.





#### 4.1.4 Thresholds

- 1) Following thresholds shall be declared in the Tender Document.
  - (a) **Minimum local content for Contractor classification:** local content percentage prescribed to qualify as Class-I or Class-II local Suppliers for various products
  - (b) **Minimum local content for eligibility to participate:** Minimum local content percentage prescribed for eligibility for a bid to be considered.
  - (c) **The margin of purchase preference:** The bid price quoted by Class-I Local Supplier should be within this percentage from the L-1 price quoted by Non-local or Class-II bidders for being eligible for purchase preference.
- 2) If not so declared, the default threshold shall be as follows:
  - (f) Local content for eligibility for Class-I; Class-II local Suppliers and Non-local Suppliers shall be 50% and above; 20% and above but less than 50%; and less than 20%, respectively.
  - (b) Minimum local content for eligibility to participate shall be 50%.
  - (c) The margin of purchase preference shall be 20%

#### 4.1.5 Purchase preference to Class-I local Suppliers

- 1) For goods and works where the Goods are divisible by nature:
  - (a) Among all qualified bids, the lowest bid shall be termed as L-1. If L-1 is 'Class-I local Supplier', the contract for full quantity shall be awarded to L-1.
  - (b) If the L-1 bid is not a 'Class-I local Supplier', 50% of the order quantity shall be awarded to L-1. After that, the lowest bidder among the 'Class-I local Supplier' whose quoted price falls within the margin of purchase preference shall be invited to match the L-1 price for the remaining 50% quantity, and a contract for that quantity shall be awarded him, subject to matching the L-1 price. In case such lowest eligible 'Class-I local Supplier' fails to match the L-1 price or accepts less than the offered quantity, the next higher 'Class-I local Supplier' within the margin of purchase preference shall be invited to match the L-1 price for the remaining quantity and so on, and the contract shall be awarded accordingly. If some quantity is still left uncovered on Class-I local Suppliers, such balance quantity shall also be ordered on the L-1 bidder.
- 2) For goods and works where the Goods are not divisible, and in the procurement of services where the bid is evaluated on price alone:
  - (a) Among all qualified bids, the lowest bid shall be termed as L-1. If L-1 is 'Class-I local Supplier', the contract shall be awarded to L-1.
  - (b) If L-1 is not 'Class-I local Supplier', the lowest bidder among the 'Class-I local Supplier' shall be invited to match the L-1 price subject to Class-I local Supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local Supplier' subject to matching the L-1 price.
  - (c) If such lowest eligible 'Class-I local Supplier' fails to match the L-1 price, the 'Class-I local Supplier' with the next higher and so on, bid within the margin of purchase preference shall be invited to match the L-1 price, and the contract shall be awarded accordingly. If none of the 'Class-I local Supplier' within the margin of purchase preference matches the L-1 price, the contract shall be awarded to the L-1 bidder.
- 3) Where parallel contracts are to be awarded to multiple bidders: In Bids where parallel contracts are to be awarded to multiple bidders subject to matching of L-1 rates or





otherwise, the 'Class-I local Supplier' shall get purchase preference over 'Class-II local Supplier' as well as 'Non-local Supplier', as per following procedure:

- (a) If there is sufficient local capacity and competition for the item to be procured, as notified by the nodal Ministry, only Class I local Suppliers shall be eligible to bid. As such, the multiple Contractors, who would be awarded the contract, should be all and only 'Class I Local Suppliers'.
- (b) In Bids, other than those mentioned above, 'Class II local Suppliers' or both 'Class II local Suppliers' and 'Nonlocal Suppliers' may also participate in the tender process along with 'Class I Local Suppliers'. If 'Class I Local Suppliers' qualify for the contract award for at least 50% of the tendered quantity in tender, the contract shall be awarded to all the qualified bidders as per award criteria stipulated in the Tender Documents. However, in case 'Class I Local Suppliers' do not qualify for the award of contract for at least 50% of the tendered quantity as per award criteria, purchase preference should be given to the 'Class I local Supplier' over 'Class II local Suppliers'/'Non-local Suppliers' provided that their quoted rate falls within the margin of purchase preference of the highest bid considered for award of contract. To ensure that the 'Class I Local Suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity, first purchase preference has to be given to the lowest among such eligible 'Class-I local Suppliers', subject to its meeting the prescribed criteria for the award of contract as also the constraint of the maximum quantity that can be sourced from any single Contractor. If the lowest among such 'Class-I local Suppliers' does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity shall be given to next higher among such 'Class-I local Supplier', and so on.

#### 4.1.6 Verification of local content and violations:

- 1) The 'Class-I local Supplier'/'Class-II local Supplier' at the time of tender, bidding, or solicitation shall be required to indicate the percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local Supplier'/'Class-II local Supplier', as the case may be.
- 2) In cases of procurement for a tender value above Rs. 10 crores, the 'Class-I local Supplier'/'Class-II local Supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practising chartered accountant (in respect of Contractors other than companies) giving the percentage of local content.
- 3) Complaints about Local content declarations may be made through the channels of Procuring Entity. Procuring Entities and Nodal Ministries may prescribe fees for such complaints.
- 4) Bids with false declarations regarding Local contents shall be rejected as responsive, in addition to punitive actions under the MII orders and for violating the Code of Integrity as per the Tender Document.

#### 4.1.7 Manufacture under license/ technology collaboration agreements with phased indigenization

- 1) If so, declared in TIS and/ or AITB, foreign companies shall enter into a joint venture with an Indian company to participate.





- 2) The Procuring Entity reserves its right, but without being under any obligation to do so, to grant exemption from meeting the stipulated local content to Bidders manufacturing indigenously a product developed abroad under a license from a foreign manufacturer (who holds intellectual property rights) under a technology collaboration agreement/ transfer of technology agreement with a precise phasing of increase in local content. Bidder must obtain such an exemption letter and submit it along with his bid to avail such an exemption.

#### **4.1.8 Information to be provided by Bidders regarding Make in India policy**

Bidder shall provide required self-declaration as detailed in Form 1.2 – Eligibility Declarations:

- 1) Self-declaration of their local content (and required certificate, in case of procurements above Rs 10 Crores) and their status as Class-I/ Class-II/ Non-local Supplier and their eligibility to participate as per this clause.
- 2) If the Tender Document indicates countries identified as not allowing Indian companies to participate in their Government procurement, then a declaration that they are not an 'Entity' of such countries (as per criteria of the FDI Policy of DPIIT as amended from time to time) and are therefore eligible to participate in this tender.
- 3) If a Bidder is claiming exemption (as obtained from relevant authorities) from meeting the stipulated local content on account of manufacturing the product in India under a license from a foreign manufacturer with the precise phasing of increase in local content, he must provide proof thereof.

#### **4.2 Support/ Preferential Treatment to Micro & Small Enterprises (MSEs)**

Policies of the Government to support Micro and Small Industries (MSEs, registered as per the following sub-clause) in comparison to non-MSE enterprises shall apply to this procurement.

##### **4.2.1 Registration of MSEs**

- 1) MSEs interested in availing such benefits must enclose in Form 1.2 with their offer the Udhyam Registration Certificate with the Udhyam Registration Number as proof of their being MSE registered on the Udhyam Registration Portal. The certificate shall be of latest but before the deadline for the bid submission.
- 2) MSEs shall be treated as owned by SC/ ST or women entrepreneurs:
  - (a) The proprietor(s) shall be SC/ ST or women In proprietary MSEs
  - (b) At least 51% shares shall be held by the SC/ ST or women partners in a partnership MSEs.
  - (c) At least a 51% share shall be held by SC/ ST or women promoters in Private Limited Companies MSEs.

##### **4.2.2 Support to MSEs**

- a) Tender sets shall be provided free of cost to MSEs.
- b) MSEs shall be exempted from payment of Earnest Money. (as per ITB-clause 9.4 below, they shall be required only to submit Bid Security Declaration)

##### **4.2.3 Reservation of specific items for procurement**

If so stipulated in Tender Information Summary (TIS Appendix to NIT), this procurement is reserved as per the Public Procurement Policy for the Micro and Small Enterprises Order, 2012, for exclusive purchase from Micro and Small Enterprises (MSEs) registered with agencies, as





mentioned in clause 4.2.3 below. In such a case, only such MSEs shall be eligible to submit a bid and be considered.

#### 4.2.4 Purchase Preference to MSEs

The Procuring Entity reserves its option to give purchase preference to MSEs compared to the non-MSE enterprises as per policies of the Government from time to time. This preference shall only apply to products produced and services rendered by Micro and Small Enterprises. If an MSE bidder quotes a price within the band of the lowest (L-1) +15 percent in a situation where the L-1 price is quoted by someone other than an MSE, the MSE bidders are eligible for being awarded up to 25 percent of the total quantity being procured if they agree to match the L-1 price. In case of more than one such eligible MSE, this 25 percent quantity shall be distributed proportionately among these bidders.

#### 4.3 Support to Start-up Enterprises

##### 4.3.1 Definition of Start-up Enterprises

1) As defined by DPIIT, an entity shall be considered as a 'Start-up':

- (a) Upto a period of ten years from the date of incorporation/ registration, if it is incorporated as a private limited company (as defined in the Companies Act, 2013) or registered as a partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under the Limited Liability Partnership Act, 2008) in India, and
  - (b) Turnover of the entity for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees, and
  - (c) The entity works towards innovation, development or improvement of products or processes or services or a scalable business model with a high potential for employment generation or wealth creation.
- 2) Provided that an entity formed by splitting up or reconstructing an existing business shall not be considered a 'Start-up'.
- 3) A Start-up so identified under the above definition shall be required to obtain and submit along with his bid a certificate of an eligible Start-up from the inter-Ministerial Board of Certification to obtain support.

##### 4.3.2 Support to Start-ups

The Government of India has ordered the following support to Start-ups (as defined by the Department of Promotion of Industrial and Internal Trade - DPIIT).

- 1) **Exemption from submission of Bid Security:** Such Start-ups shall be exempted from payment of Earnest Money. (as per ITB-clause 9.4 below, they shall be required only to submit Bid Security Declaration)
- 2) **Relaxation in Prior Turnover and Experience:** The Procuring Entity reserves its right to relax the condition of prior turnover and prior experience for start-up enterprises subject to meeting of quality & technical specifications. The decision of the Procuring Entity in this regard shall be final.





## 5. The Goods, Eligible Goods and Basis of Evaluation

### 5.1 Eligible Goods –Origin and Minimum Local Content

Unless otherwise stipulated in the Tender Document, all ‘Goods’ and ‘incidental Works/ Service’ to be supplied under the contract must conform to i) restrictions on certain countries with land-borders with India (ITB-clause 3.3; ii) minimum local content (Make in India Policy – ITB-clause 4.1). If Bidder avails benefits under any preferential policy as Class-I Local Supplier or as MSE or Start-up enterprise, the Goods must not circumvent the provisions relating to such benefits.

### 5.2 Basis of Evaluation for Schedules/ packages

- 1) Unless otherwise stipulated in the TIS/ AITB, if there is more than one schedule/ package in Section VI: Schedule of Requirements, evaluation of financial ranking of bids shall be done separately for each schedule, and Bidder has the option to submit its quotation for any one or more schedules/ packages and, also, to offer special discount for combined schedules. However, Bidder shall quote for the complete Goods as stipulated in a schedule quoted.
- 2) Unless otherwise stipulated in the TIS/ AITB, if there is only a list of items without grouping into schedules, evaluation of financial ranking of bids shall be done for each item separately, and Bidder has the option to submit its quotation for any one or more items and, also, to offer special discount for combined items. However, Bidder shall quote for all the destinations included in an item quoted.
- 3) Unless otherwise stipulated in the TIS/ AITB, if there is only one item in the Goods with several destinations, evaluation of financial ranking of bids shall be done separately for each destination included in that item separately, and Bidder has the option to submit its quotation for any one or more destinations and, also, to offer special discounts for all destinations.





**B. SPECIAL CONDITIONS OF CONTRACT (SCC)**

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Clause	Special Condition of Contract (SCC)				
GCC 2.1.1(l)	<b>The Purchaser is:</b> <b>Jawaharlal Nehru Centre for Advanced Scientific Research</b> <b>Jakkur Post, Bengaluru – 560064</b> <b>Karnataka-India</b>				
GCC 2.1.1(m)	<b>The Final Destination is:</b> <b>Jawaharlal Nehru Centre for Advanced Scientific Research</b> <b>Jakkur Post, Bengaluru – 560064</b> <b>Karnataka-India</b>				
GCC 2.13.1	<b>Performance Security</b> The amount of the <b>Performance Security shall be 10% of the contract value</b> , valid up to 60 days after the date of completion of performance obligations including warranty obligations.				
GCC 2.15.3	<b>Delivery – Mode of Shipment:</b> (a)   The <b>mode of transportation shall be by Air / Rail / Road.</b>				
GCC 2.17.1	<b>Insurance</b> The <b>Insurance</b> shall be for an amount equal to <b>110% of the value</b> of the contract from within <b>“warehouse to warehouse (final destination)”</b> on <b>“all risk basis”</b> including strikes, riots and civil commotion, in addition to <b>storage policy for 60 days</b> is advised so as to ensure the inspection by the Indian Agent at the time of opening the packages.				
GCC 2.21.3	<b>Warranty:</b> The period of validity of the Warranty shall be: The warranty shall remain valid for <b>TWO years</b> after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination.				
GCC 2.21.1	<b>Payment Details:</b> The method and conditions of payment to be made to the Supplier under this Contract shall be as follows: The payment shall be made in Indian Rupees, as follows:				
	<table border="1"> <tr> <td data-bbox="327 1668 534 1859">(a)</td> <td data-bbox="534 1668 1444 1859">90% of the Contract value shall be paid to the Supplier against delivery and balance 10% will be paid after the date of the completion, commissioning and installation certificate issued by the Purchaser and on submission of Bank Guarantee for 10% of Order value valid during the period of Warranty.</td> </tr> <tr> <td data-bbox="327 1859 534 1937">(b)</td> <td data-bbox="534 1859 1444 1937"><b>E-Payment:</b> All payments, JNCASR prefers to make Electronic Transfers (RTGS) through Canara Bank, IISc Branch, Bengaluru.</td> </tr> </table>	(a)	90% of the Contract value shall be paid to the Supplier against delivery and balance 10% will be paid after the date of the completion, commissioning and installation certificate issued by the Purchaser and on submission of Bank Guarantee for 10% of Order value valid during the period of Warranty.	(b)	<b>E-Payment:</b> All payments, JNCASR prefers to make Electronic Transfers (RTGS) through Canara Bank, IISc Branch, Bengaluru.
(a)	90% of the Contract value shall be paid to the Supplier against delivery and balance 10% will be paid after the date of the completion, commissioning and installation certificate issued by the Purchaser and on submission of Bank Guarantee for 10% of Order value valid during the period of Warranty.				
(b)	<b>E-Payment:</b> All payments, JNCASR prefers to make Electronic Transfers (RTGS) through Canara Bank, IISc Branch, Bengaluru.				
	<b>NOTE:</b> ➤ All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc.), wherever applicable.				
GCC	<b>Liquidated Damages / Penalty Clause</b>				



*[Handwritten signature in blue ink]*



2.27.1	(a)	As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise LD clause will be applicable /enforced
	(b)	If the supplier fails to Supply, Install and Commission the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay <b>liquidated damages of 0.5%</b> of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier
	(c)	JNCASR reserves the right to cancel the order in case the delay is more than 10 weeks. Penalties, if any, will be deducted from the Security Deposit
	(d)	The <b>maximum</b> amount of <b>penalty</b> shall be 10%.
	(e)	The liquidated damages shall be levied on the delivered price of the delayed Goods or unperformed Services or contract value.
GCC 2.34.1	<b>Applicable Law / Jurisdiction</b> The <b>place of jurisdiction</b> is <b>Bengaluru, India.</b>	
GCC 2.35.1	<b>Notices</b> <b>For notices,</b> the Purchaser's address is <b>The President</b> <b>Jawaharlal Nehru Centre for Advanced Scientific Research</b> <b>Jakkur Post, Bengaluru – 560064</b> Karnataka-India	

The successful Bidder should execute an Integrity Pact before the award of Contract.






## SCHEDULE OF REQUIREMENT

The Schedule of Requirement must clearly specify **the time frame required (Schedule) for delivery of goods and services to be completed** by the bidder in reference to Scope of Supply in Clause-4.2 if the Contract is awarded for the offer / proposal submitted by the bidder in response to this Tender.

### A) Delivery Schedule:

Sl. No.	Brief Description of Goods and Services	Quantity & Unit	Delivery Schedule

Period of delivery shall start from : \_\_\_\_\_

### B) Term of delivery / Delivery Term :

Goods from India	
------------------	--

### C) Time frame required for conducting installation, commissioning of the equipment, acceptance test, training, etc. after the arrival of consignment or before dispatch of equipment:

Sl. No.	Activity	Time Frame
1	Site Preparation (if required)	
2	Installation & Commissioning	
3	Acceptance Test	
4	Training	
5		

Place : \_\_\_\_\_

Signature of the Bidder: \_\_\_\_\_

Date : \_\_\_\_\_



*(Handwritten signature)*



## SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

### 6.1 Detailed Specification Annexure - K

### 6.2 Scope of Supply

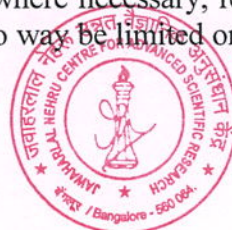
**Scope of Supply includes** the following:

- (i) Supply of the equipment / system as specified in 6.1 above
- (ii) Installation & Commissioning
- (iii) Training as specified below in 6.4
- (iv) On site comprehensive Warranty for 2 Years as specified in 6.5 (i) below

### 6.3 Inspection & Tests

#### 6.3.1 General

- (i) The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified here. The Supplier shall at its own expense and at no cost to the JNCASR carry out all such tests and/or inspections of the Goods and Related Services as are specified in the PART 4 or as discussed and agreed to during the course of finalization of contract.
- (ii) The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the JNCASR.
- (iii) Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- (iv) The JNCASR or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the JNCASR and what inspections and tests the JNCASR requires and where they are to be conducted. The JNCASR shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
- (v) Should any inspected or tested Goods fail to conform to the specifications, the purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- (vi) The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the



*[Handwritten signature]*



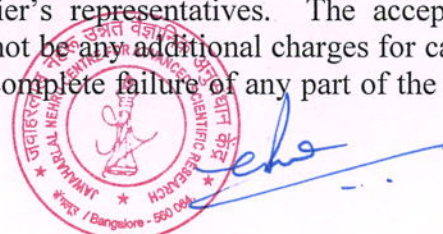
- Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- (vii) The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
  - (viii) With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and/or the Indian agent, if any, shall be responsible for follow up with their Principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after customs clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/ Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
  - (ix) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance Manuals together with Drawings of the goods and equipment built. These shall be in such details as will enable the Purchase to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
  - (x) The Manuals and Drawings shall be in the ruling language (English) and in such form and numbers as stated in the Contract.
  - (xi) Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such Manuals and Drawing have been supplied to the Purchaser.
  - (xii) On successful completion of acceptability test, receipt of deliverables, etc and after the Purchaser is satisfied with the working of the equipment, the acceptance certificate signed by the Supplier and the representative of the Purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the equipment. Acceptance certificate form as given in Annexure-I should be signed by authorised representative of Supplier & Purchaser.
  - (xiii) Installation demonstration is to be arranged by the supplier and the same is to be done within 15 days of the arrival of the equipment at site.

### 6.3.2 Manufacturer's Inspection Certificate

After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser reserves the options to be present at the supplier's premises during such Pre- dispatch inspection and testing.

### 6.3.3 Installation, Commissioning & Acceptance Test

The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at Purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment





is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

In the event of the ordered item failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which, the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.

#### 6.4 Training

1)	Location	
2)	Number of persons	
3)	Period of Training	
4)	Nature of Training	

#### 6.5 Incidental Services

##### (i) On site Comprehensive Warranty:

- **2 Years** from Installation & Commissioning and date of acceptance
- Down-time call attendance should be within 48 hrs
- In case the Equipment / System remains non-operational for more than 7 days then warranty period will be extended for the equivalent period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract

#### 6.6 Delivery Schedule

#### 6.7 Commercial evaluation of bid

The bid will be treated as **incomplete** if bidder has **not quoted** for all the components given in scope of supply (clause 6.2) and **the incomplete bid will be rejected**. The bidder should also quote for all incidental services (clause 6.5). The bid will be commercially evaluated for the components in the scope of supply.





## Qualification Requirements

That adequate and specialized expertise is already available **or** will be made available following the execution of the contract in the Purchaser's country, to ensure that **the support services are responsive and adequate** as per **ITB 1.13.2(c)**.

The Indian Agents of foreign manufacturers/ suppliers quoting directly on behalf of their principals for items appearing in the **restricted list of the current EXIM policy of the Govt. of India** must be registered with DGS&D.

Either the Indian Agent on behalf of the foreign principal or the foreign principal directly could bid in a tender **but not both**. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. Further, to maintain sanctity of tendering system **one Indian agent cannot represent two different foreign principals in one tender**.

**The bidders who do not fulfil the above Eligibility, Financial and Technical Qualification Criteria shall be rejected during the Evaluation of Technical Bid.**

### **I. Formation of Technical and Purchase Committee**

The Technical Evaluation Committee(s) will be constituted by President, JNCASR. He may nominate some external/expert members, in the interest of JNCASR.

### **II. Terms of the Technical and Purchase Committee**

A committee duly constituted by the President, JNCASR will go through the technical aspects of the tender and recommend short listed firms. The recommendation of the technical committee is the final and binding on all the parties.

- a) The technical evaluation will be an assessment of the Technical Bid. JNCASR representatives will proceed through a detailed evaluation of the Technical Bids as defined in **Schedule of requirements**, in order to determine whether they are substantially responsive to the requirements set forth in the tender. In order to reach such a determination, JNCASR will examine the information supplied by the Bidders, and shall evaluate the same as per the specifications mentioned in this tender.
- b) The technical committee may formulate evaluation criteria in addition to the specifications and requirements indicated in the tender, in the interest of JNCASR and this criteria/recommendation will also form as a part of short-listing of the firms.
- c) The Technical Committee will examine all the Technical aspects of the bids received. Further, the Technical Committee may seek additional information from the existing users at JNCASR or from other Labs/Organisations and also call for Technical presentations from the bidders if it is required so.
- d) The recommendation/decisions of the Technical and Purchase Committee is final and binding on all the suppliers.





### III. Evaluation Criteria

- a) On the due date the Technical bids will be opened and referred to the Technical Committee which is duly constituted by the President, JNCASR.
- b) The information received and the bids already submitted together will be examined with reference to the tendered specifications and evaluation is made by the Technical Committee.
- c) After the technical evaluation is completed and approved, JNCASR shall inform to the bidders whose bids have been rejected technically with the reasons for rejection.

### IV. The commercial offers of the vendors whose technical offers are found to be technically deficient or do not meet the qualification criteria as specified in this tender will be returned to them without opening.

- a) The successful bidders will be informed regarding the date and time of Commercial bid opening.
- b) The purpose of obtaining two bids (technical and commercial) is to evaluate all the firms on technical basis with reference to the tendered specifications, performance of similar Solutions/Applications elsewhere, obtaining users' views with reference to the earlier supplies. This will enable the technical committee to arrive at a fair recommendation in the interest of the organization.
- c) In the event of seeking any clarification from various bidders by JNCASR, the bidders are required to furnish only technical clarifications that are asked for. No amendment to commercial bid will be entertained at that stage. In case if a bidder fails to quote for a particular item it amounts to non-compliance and hence such bid will not be considered for further evaluation. Further during this process if any bidder indicates the price during the clarification such bids also will not be considered for further evaluation.

### V. IMPORTANT NOTE

- a) Any bidder or their authorized agent who had earlier participated in the bidding of JNCASR and have not revealed their agency details or commission and subsequently drawn JNCASR to litigations or inconvenience in discharging the JNCASR's obligation, the bids of such firms will not be considered for technical evaluation.
- b) All the bidding firms or their authorized representatives have to submit a self-certificate as per the format given below:-

“Certified that we/our authorized agent have not involved in any activities or suppressed the facts either in the past or at present and have not filed any case against JNCASR”.



*[Handwritten signature]*



**Bidder Information Form**

(a) [The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done on the letter head of the firm]

Date : [insert date (as day, month and year) of Bid Submission]

Tender No : [insert number from Invitation for bids]

01.	Bidder's Legal Name [insert Bidder's legal name]
02.	In case of JV, legal name of each party: [insert legal name of each party in JV]
03.	Bidder's actual or intended Country of Registration: [insert actual or intended Country of Registration]
04.	Bidder's Year of Registration: [insert Bidder's year of registration]
05.	Bidder's Legal Address in Country of Registration: [insert Bidder's legal address in country of registration]
06.	Bidder's Authorized Representative Information Name: [insert Authorized Representative's name] Address: [insert Authorized Representative's Address] Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers] Email Address: [insert Authorized Representative's email address]
07.	Attached are copies of original documents of: Articles of Incorporation or Registration of firm named in 1, above.

Signature of Bidder \_\_\_\_\_

Name \_\_\_\_\_

Business Address \_\_\_\_\_







MANUFACTURERS' AUTHORIZATION FORM

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.]*

Date : *[insert date (as day, month and year) of Bid Submission]*

Tender No. : *[insert number from Invitation For Bids]*

To : *[insert complete name and address of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 2.20 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ *[insert date of signing]*





ANNEXURE-C

**FORMAT FOR BID SECURITY DECLARATION (on your letter head)**

Date : [insert date (as day, month and year)]

We, the undersigned declare that: we understand that, according to your tender conditions, bids must be supported by a Bid-Securing Declaration. We accept that we will automatically be suspended from being eligible for bidding in any future tenders of JNCASR for the period of time of 3 years starting from December 2020. If we are in breach of our obligation(s) under the bid conditions, because we: (a) have withdrawn our Bid during the period of bid validity specified in the Letter of Bid; or (b) having been notified of the acceptance Of our Bid by JNCASR during the period of bid validity. (c) modify or change technical specifications of our bid (d) fail or refuse to execute the Contract, if required, or (d) fail or refuse to furnish the Performance Security, in accordance with tender condition.


We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder, or (ii) twenty-eight days till the expiration of our Bid.

Signed: [insert signature of person whose name and capacity are shown). In the capacity of [insert legal capacity of person signing the Bid-Securing Declaration)

Name: [insert complete name of person signing the Bid-Securing Declaration] duly authorized to sign the bid for and on behalf of:

[insert complete name of Bidder] Dated on ..... Date of .....[insert date of signing]  
Corporate Seal (where appropriate)

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all Partners to the Joint Venture that submits the bid].





**PERFORMANCE STATEMENT FORM**

**ANNEXURE-D**

**Details of similar equipment / systems supplied & installed during past 3 years in India**

Name of the Firm \_\_\_\_\_

Order Placed by (full address of Purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of deliver as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been installed/ working satisfactory? (Attach a certificate from the purchaser / Consignee)	Name of Contact person along with Telephone No., FAX No. and e-mail address

Signature and Seal of the manufacturer/Bidder .....

Place :

Date :





**ANNEXURE – E**

**PART – II**  
**(Refer Clause 1.25 of Tender Document)**

Sl. No.	TENDER REQUIREMENT	COMPLIANCE	Document Submitted
1	Bid is Signed	Yes / No	Yes / NA
2	Bid Validity (90 days)	Yes / No Bid valid up to	Yes / NA
3	Warranty: Duration of warranty from Installation & Commissioning and date of acceptance	Yes / No	Yes / NA
4	Agree to submit Performance Security 3% of PO Value as per Clause 2.12.1	Yes / No	Yes / NA
5	Bidder Information Form enclosed as per Annexure – A	Yes / No	Yes / NA
6	Manufacturers Authorisation Form (MAF) (where ever Applicable) Annexure – B	Yes / No	Yes / NA
7	Bid Security Declaration as per Annexure - C	Yes / No	Yes / NA
8	Performance Statement Form enclosed as per Annexure - D	Yes / No	Yes / NA

The Bidder should submit other documents such as fulfillment of financial qualification criteria, Schedule of Requirement and various forms as specified.





PERFORMANCE SECURITY FORM

**MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY**

To,  
.....

WHEREAS ..... (name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no. .... dated .....to supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of ..... (amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

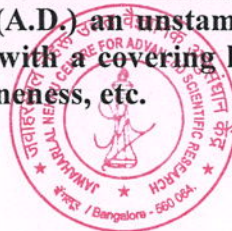
This guarantee shall be valid until the ..... day of ....., 20.....

(Signature of the authorized officer of the Bank)

.....  
Name and designation of the officer

.....  
Seal, name & address of the Bank and address of the Branch

**Note: Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.**





ANNEXURE-G

PERFORMANCE BANK GUARANTEE FORM

To, .....

WHEREAS ..... (name and address of the supplier) (here in after called "the supplier") has undertaken, in pursuance of contract no. .... dated .....to supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of ..... (amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the ..... day of ....., 20.....

(Signature of the authorized officer of the Bank)

.....  
Name and designation of the officer

.....  
Seal, name & address of the Bank and address of the Branch





**ANNEXURE – H**

**INDEMNITY BOND**

No. -----

Date:-----

***1) Amalgamation/Acquisition***

In the event of M/s. -----proposes for amalgamation, acquisition or sale of its business to any other firm during this contract period, M/s.----- and proposed Buyer/Successor of the Principal Company are liable to execute, fulfill contractual obligations without any deviations. For this purpose M/s. -----/M/s.----- and proposed Buyer/Successor of the Principal Company shall indemnify itself to the President, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru to fulfill the contractual obligations as per the terms of the JNCASR Global Tender and quotation of M/s. -----No. ----- dated-----and Jawaharlal Nehru Centre for Advanced Scientific Research P.O. No.-----dated -----. The contractual obligations are supply, installation, commissioning, warranty maintenance/replacement of spares, accessories etc. as per the above mentioned Purchase Order.

***2) Joint Venture, Consortium or Association***

If the Supplier is a joint venture, consortium, or association, all the parties shall be jointly and severally liable to the JNCASR for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the JNCASR.

***3) Patent Indemnity***

The Supplier shall, subject to JNCASR's compliance and indemnify and hold JNCASR and its employees and officers harmless from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which JNCASR may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Goods by the Supplier or the use of the Goods in India; and (b) the sale in any country of the products produced by the Goods.

For M/s. -----  
Principal Supplier.

For M/s. -----  
Indian Agent.





## ANNEXURE - K

### TECHNICAL SPECIFICATION FOR ULTRA HIGH VACUUM MAGNETRON SPUTTERING MACHINE

A robust and highly reliable UHV Magnetron Sputtering machine that is state of the art, computer controlled and user friendly is required. The sputtering machine will be used for the growth of high quality and uniform thin film, multilayer, and superlattices. The system is primarily intended for the growth of oxide and chalcogenide. In some cases, nitrides will be also deposited.

The system must have majority of its system, electronic and mechanical parts computer controlled and should result in stoichiometric oxide and chalcogenide thin films (such as CdO, VO<sub>2</sub>, GST, MoS<sub>2</sub> and others) and multilayer/superlattice. These materials will be utilized for their research and development in photonics, electronics and phase-change material research.

The whole system must be assembled in one unit and should be artistically well designed for its excellent use and view.

Details specifications for each of the units are presented in details.

#### Detailed Specifications

##### 1. Deposition Chamber

- Cylindrical style chamber, 304L SS, electro-polished (box-style chamber not desired)
- Sputter up configuration.
- Hinge mounted top flange.
- Removable internal stainless-steel shielding to protect all chamber parts from depositions. The shielding will be removed periodically and will be cleaned and re-inserted.

##### Ports on the Chamber Body:

1. Viewports with shutters.
2. Turbo Pump with gate valve, and ports for the same.
3. Process gas introduction.
4. Vacuum gauges.
5. Vent valve.
6. Load-lock.
7. Ports for at least 7 Confocal Magnetron Sources. Additional port capable of accommodating one magnetron source in bottom center of chamber is required.
8. Heater Assembly.



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9. Viewport for the measurement of substrate temperature with an external pyrometer.
10. Light mounted to chamber viewport for good internal chamber visibility.
11. All chamber ports must be metal-sealed (with the exception of top lid.)
12. Chamber must be designed to incorporate RHEED as future upgrade. Vendor must guarantee RHEED compatibility without the need for additional magnetic shielding.
13. Chamber must include spare 10" CF port located opposite load-lock for future expansion
14. Internal and external photos of OEM's previously manufactured system with this specific layout

## 2. Load Lock:

1. Dual position load lock. Two substrate holders can be placed in the same vent sequence for greater throughput.
2. With viewport and easy access to the chamber.
3. Automatic or Manual isolation valve separates load lock and the main chamber.
4. Turbo pump and reaches  $\sim 10^{-6}$  Torr. in less than 15minutes.
5. Pump and vent sequence controlled from the computer software.
6. Magnetic transfer arm and easy process to load substrate holder from transfer arm to substrate deposition position.
7. Full Range gauge to read pressure.
8. The main chamber must reach its original base pressure after closing the load lack gate valve within 20 minutes for dry and clean chamber and loadlock.
9. Heavy-duty Metal/Alloy or low volume aluminum chamber body machined from a single billet.
10. Minimum 80 l/s turbo molecular pump.
11. Minimum 4cfm mechanical backing pump.
12. Transfer arm must have heavy duty metal/alloy or low volume aluminum shaft to minimize transfer arm sag (transfer arm thickness must be specified when submitting quotation).
13. Transfer arm must not extend outside of system footprint of instrument rack.

## 3. Vacuum Pumping

1. Base pressure below  $5 \times 10^{-8}$  Torr for clean and dry chamber.
2. 700 l/s (or better) Turbo pump for main chamber vacuum.
3. For Turbo pump, necessary dry pump and all other parts must be provided.
4. All vacuum related controls must be connected to the computer and should be controlled from computer.
5. Software and System must have machine learned ability to prevent any catastrophic failure in case of emergency or mistakes from user.



*ehg*



6. Dry pump as roughening pump.
7. The desired base pressure should be attained with minimal delay time.

#### 4. Magnetron and Shutters

1. Includes 3 UHV magnetron sputtering sources with target size 2" diameter with pneumatic shutter.
2. Gun flange must be able to accommodate 1 (one) 1" UHV magnetron source located on the bottom center for direct deposition.
3. All 2" sputtering guns must be able to accommodate up to 0.125" thick magnetic targets, and 0.25" thick non-magnetic targets.
4. All 2" magnetrons must have modular magnet design to allow balanced, unbalanced, and magnetic material configurations. Dedicated gun for magnetic material sputtering is not accepted, must have versatility.
5. Individual gas injection capability via VCR port in cluster flange is required.
6. The computer-controlled shutters must open and close for 100s of cycle within one deposition without being stuck or in half open/close position, and they must open and close in less than 1 second as multilayers and superlattices will be deposited.
7. All shutters must have capability to take off from the magnetrons and attached parts for cleaning from time to time.
8. Each magnetron must have proper tilt that is optimized for uniform film deposition. The supplier will make sure that the proper tilt is in place for uniform deposition.
9. Pneumatic shutters for confocal sources must be flip-top style. Domed style or rotary styles are not desirable.
10. Magnets must be located in vacuum, outside of cooling water, with Curie point of 200°C.
11. Sources must be bakeable to 200°C, eliminating the need to remove magnets prior to system bakeout.
12. Vendors must be able to provide specialized backing plates, targets, and clamping rings for dielectric materials that are inherently brittle. In order to eliminate additional target stress, the clamping ring must not clamp down on the target material itself. Pictures of this design must be provided.

#### 5. Power Supply

1. Includes 2 DC power supply having a maximum power of 750W (or more) and minimum 10W (or less) and with switch box and cable sets.  
DC Power supplies must allow for simultaneous display of voltage, amperage, and power on the active front panel for diagnostic purposes. Changing display between different parameters is not desired.  
DC Power supplies must have ability to control shutter actuation to allow manual operation outside computer control.



*[Handwritten signature]*



DC Power supplies must have kW hour monitoring ability

DC power supply must provide stable plasma under the following conditions: 1W at 2mTorr pressure

2. Power variation must be less than 1-2% of its set value.
3. Includes 1 RF power supply having 300W power with auto-matching network and cable sets

RF power supply must provide stable plasma under the following conditions: 3W at 3mTorr pressure

4. Power should be increased/decreased from software without switching off the plasma.
5. Power control must be computer controlled.

#### 6. Substrate Stage.

1. Substrate stage must accommodate 2-inch or larger substrate holder.
2. Substrate holder must be able to hold 2-inch or larger substrate, 1/4 x 2-inch substrate and 1cm x 1cm substrate, 10 mm x 5 mm substrate and 5 mm x 5 mm substrate.
3. Substrate holder must be compatible for custom substrate carriers where tape, pins and clips are not required to mount the substrate.
4. Mounts on top chamber for sputter up orientation.
5. Confocal configuration on vertical axis of the chamber.
6. Substrate rotation during deposition with 0 to 40 RPM.
7. Substrate can be heated up to  $850 \pm 1^\circ\text{C}$ .
8. Room temperature to  $850^\circ\text{C}$  must be reached within 25 minutes.
9. The substrate temperature within the specified range must hold up for up to few days.
10. The substrate to target distance modulation is required. Working distance range between confocal sputter sources and substrate holder must allow for 3.5"-7.5" distance.
11. Substrate must have shutter with pneumatic control and must be controlled from computer.
12. The substrate shutter must have machine learned program so as not to hit the substrate holder in case of a user's mistake.
13. While the heating technique (principle with which the substrate is heated) is flexible, it must be simple and in case a protector is required for the heater from materials being deposited on it, it should be supplied.
14. The substrate holders must be load lock compatible, and should be made of materials that are UHV compatible.
15. Substrate holder must be equipped with a water-cooled reflector box to minimize stray radiation
16. Substrate holder must be equipped with substrate gas distributor for reactive gas introduction at the substrate level to prevent potential for poisoning of target materials.





## 7. Gas Handling

1. 3 Mass flow Controllers (MFC). One each for Ar (100sccm.), N<sub>2</sub> (50 sccm.) and O<sub>2</sub> (100 sccm.) with pneumatic isolation valve.
2. Must be controlled from computer.
3. Plumbing of source gases to all three-sputter source and substrate ring. (The values can be manual).
4. All plumbing and hardware must have pneumatic valves for chamber roughening and venting.
5. System must be capable of accommodating an additional (4th) MFC in the future. Must include mounting space and software/hardware capacity.

## 8. Pressure Control

1. Closed Loop, automatic downstream pressure control. (upstream pressure control is not desirable)
2. Series 64 automatic pressure control for turbo pump throttling and isolation (8"CF size).
3. Manual vent valve.

## 9. Computer and Software Control

1. Software for full control of the entire system, and attached with a computer.
2. Computer control software must be Lab VIEW based (2015)
3. Must use Windows 10 OS
4. Interfaces with up to (5) DC & (4) RF generators for control of output mode, setpoint, ramping & plasma detection
5. 100+ separate password protected accounts for process layer & process security
6. Lab VIEW software must utilize analog communication
7. Thin film, multilayer and superlattice recipe can be created, stored and recalled.
8. Easy to use interface to create recipe.
9. Data logging capability.
10. Co-deposition/co-sputtering capability.
11. Display all relevant shutter positions, DC and RF power, gas flow rate, deposition pressure, temperature or the target, substrate rotation speed and other parameters for a user to accurately control the entire process.
12. Support for changes in software in future when modifications are made in the system.

## 10. Recirculating Water Chiller:

1. System must include 17,000+ BTU closed-loop water chiller
2. Chiller temperature range must be between 5C-40C



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## 11. Utilities:

1. Vendor shall provide the details of all the utilities/ facilities such as power requirement, running load, footprint, pressure and flow rates for compressed air, process gases, cooling water, exhaust requirement etc., along with the size and types of connectors required.
2. Electrical Requirement: The system shall conform to the Indian power supply standards.
3. Includes water and vacuum interlocks
4. Water and vacuum interlocks must be tied into Mains power to prevent operation of power supplies without interlocks being satisfied. This prevents users from operating power supplies without proper safety restrictions in place.

## 12. Guarantees:

1. Con-Focal Deposition Uniformity: +/- 2.5% over 2" or 4" diameter wafer with 5mm edge exclusion with RF deposited SiO<sub>2</sub> or reactively deposited TiN (measured optically with vendor's ellipsometer).
2. Base Vacuum: Better than or equal to  $5.0 \times 10^{-8}$  Torr
3. Rate of Rise: Greater than 10 minutes from  $1 \times 10^{-6}$  Torr to  $1 \times 10^{-5}$  Torr
4. Pump down:  $5 \times 10^{-7}$  Torr or better in 45 minutes or less from clean, dry, and empty environment after N<sub>2</sub> vent.

### Must include photos/documentation of the following:

1. Table top work space
2. Viewport design
3. Picture of similar sputter gun configuration to provide proof of experience. Drawings or schematics not accepted.
4. Information on backing plate design for oxide targets, to ensure good cooling and target stability.
5. Letter from RHEED manufacturer confirming successful integration of their product into similar equipment.
6. Video of load-lock system showing actuation of transfer system
7. Manufacturing information on caster rating
8. Testing documentation on low power operation of DC and RF power supplies. Critical for ultra-thin film applications.
9. Vendor must have supplied similar machines to at least 5 customers over the last five years and vendor must provide us the detailed contact information of those customers.



*Signature*



13. On-site Commissioning:

Vendor must provide at least (2) days of on-site commissioning, installation, and training at our facility.

14. Warranty

1. The system must have 1 year of comprehensive warranty including all components and parts, except for the consumables.
2. The system must have 2 years warranty on all vendor-manufactured components. Specific components manufactured by vendor must be listed.

15. Optional Items (To be quoted separately)

1. 1" magnetron sputtering source with pneumatic shutter and individual gas injection capability via port on cluster flange. (Source accommodates targets up to 1" in diameter and 0.12" thick) - To be mounted on chamber bottom in direct deposition orientation.
2. 300-Watt RF Power source generators, auto-matching network and cable set.
3. Alumina Grit Blaster (including)
  - One quality of 1/4- inch steel spray nozzle.
  - Five view window underlayments.
  - One pair of extended work gloves.
  - One work light.
  - One dust collector vac with spare filter.
  - Two Pkg. Al2O3 grit, Mesh 35-100 GRIT:60 15# each.

*ehs*





